Fear appeal theory

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ABSTRACT

A fear appeal posits the risks of using and not using a specific product, service, or idea such that if you don't "buy," some particular dire consequences will occur. That is, fear appeals rely on a threat to an individual's well-being that motivates him or her toward action, e.g., increasing control over a situation or preventing an unwanted outcome. While threat and efficacy clearly are important for fear appeal effectiveness, these two ingredients alone are not sufficient. Additionally, empirical results regarding fear appeal effectiveness are not conclusive. However, the literature conventionally agrees that more effective fear appeals result from a higher fear arousal followed by consequences and recommendations to reduce the negativity. The purpose of this article is to review and examine the fear appeal literature with the aim of understanding the current overall fear appeal theory. In particular, this paper includes the following sections: introduction, definition of a fear appeal, use of fear appeals, theories of fear appeals, overall findings from the fear appeal theories and literature, and summary.

Keywords: Fear appeal, fear appeal theories, and marketing communications

INTRODUCTION

An appeal is the motive to which an ad is directed. Its purpose is to move the audience toward a goal set by the advertiser. Fear appeals are commonly used in many types of marketing communications, e.g., the marketing of products, services, social causes, and ideas. The basic message is "if you don't do this (buy, vote, believe, support, learn, etc.), some particular dire consequences will occur" (Glascoff, 2000, 35). That is, advertisers invoke fear by identifying the negative results of not using the product or the negative results of engaging in unsafe behavior. In general, however, fear appeals are effective in increasing ad interest, involvement, recall, and persuasiveness (LaTour, Snipes, and Bliss, 1996). "Fear appeals are one of the most frequently used motivators to get people to help themselves" (Bagozzi and Moore, 1994, 56). In fact, fear appeals have grown in popularity because advertisers have found them to increase ad interest and persuasiveness (LaTour, Snipes, and Bliss, 1996). Evidence also suggests that individuals "better remember and more frequently recall ads that portray fear than they do warm or upbeat ads or ads with no emotional content" (Snipes, LaTour, and Bliss, 1999, 273). The purpose of this article is to review and examine the fear appeal literature with the aim of discovering the current overall understandings of fear appeal theory. In particular, this paper includes the following sections: introduction, definition of a fear appeal, use of fear appeals, theories of fear appeals, overall findings from the fear appeal theories and literature, and summary.

DEFINITION OF A FEAR APPEAL

Fear appeals are built upon fear. Fear is "an unpleasant emotional state characterized by anticipation of pain or great distress and accompanied by heightened autonomic activity especially involving the nervous system…the state or habit of feeling agitation or dismay…something that is the object of apprehension or alarm" (Merriam-Webster, 2002).

Fear evolved as a mechanism to protect humans from life-threatening situations. As such, nothing is more important than survival and the evolutionary primacy of the brain's fear circuitry. Matter-of-fact, the brain's fear circuitry is more powerful than the brain's reasoning faculties. According to Begley, Underwood, Wolffe, Smalley, and Interlandi (2007, 37),

> "The amygdala sprouts a profusion of connections to higher brain regions – neurons that carry one-way traffic from amygdala to neo-cortex. Fear connections run from the cortex to the amygdala, however. That allows the amygdala to override the products of the logical, thoughtful cortex, but not vice versa. So although it is sometimes possible to think yourself out of fear ('I know that dark shape in the alley is just a trash can'), it takes great effort and persistence. Instead, fear tends to override reason, as the amygdala hobbles our logic and reasoning circuits. That makes fear 'far, far more important than reason'."

Due to this circuitry, fear is more powerful than reason. Fear can sometimes be evoked easily and absurdly for reasons that live in mankind's evolutionary past. For example, reacting to a nonexistent threat, such as a snake that is really a stick, is not as dangerous as the other way around - failing to respond to the actual threat of a snake. The brain seems to be wired to flinch first and ask questions second. As a consequence, fear can be easily and untruthfully sparked in such a way that is irrational and not subject to reason. (Begley, et al., 2007; Maren, 2008)

Even though many marketers can recognize an appeal based on fear, there is no agreement regarding what causes a message to be categorized as a fear appeal (Witte, 1993). In general, however, a fear appeal posits the risks of using and not using a specific product, service, or idea. Fear appeals are defined by Kim Witte (1992, 1994), a prominent author in this area, as "persuasive messages that arouse fear by depicting a personally relevant and significant threat, followed by a description of feasible recommendations for deterring the threat" (Gore, Madhavan, Curry, McClurg et al., 1998, 34) The premise is that fear appeals rely on a threat to an individual's well-being which motivates him or her towards action; e.g., increasing control over a situation or preventing an unwanted outcome. That is, a fear appeal is a type of "psychoactive" ad that can arouse fear in the participant regarding the effect of the participant's suboptimal lifestyle (Hyman and Tansey, 1990). (Lewis, Watson, Tay, and White, 2007)

A fear appeal is composed of three main concepts: fear, threat, and perceived efficacy. "Fear is a negatively valenced emotion that is usually accompanied by heightened physiological arousal. Threat is an external stimulus that creates a perception in message receivers that they are susceptible to some negative situation or outcome. And, perceived efficacy is a person's belief that message recommendations can be implemented and will effectively reduce the threat depicted in the message." (Gore et al., 1998, 36) Witte and Allen (2000) have concluded that fear appeals are most effective when they contain both high levels of threat and high levels of efficacy. That is, the message needs to contain (1) a meaningful threat or important problem and (2) the specific directed actions that an individual can take to reduce the threat or problem. The individual needs to perceive that there is a way to address the threat and that he or she is capable of performing that behavior. (Eckart, 2011; Jones, 2010; Lennon and Rentfro, 2010) In addition, Cauberghe, De Pelsmacker, Janssens, and Dens (2009, 276) state, "Message involvement is a full mediator between evoked fear, perceived threat, and efficacy perception on the one hand, and attitudes towards the message and behavioral intention to accept the message on the other."

Fear appeals can be direct or indirect. A direct fear appeal focuses on the welfare of the message recipient. An indirect fear appeal focuses on motivating people to help others in danger. Whether the fear appeal is direct or indirect, three additional factors contribute to success: (1) design ads which motivate changes in individual behavior, (2) distribute the ads to the appropriate target audience, and (3) use a sustained communication effort to bring about change (Abernethy and Wicks, 1998).

USE OF FEAR APPEALS

Fear appeals have been used for many products, services, ideas, and causes. Some examples include smoking, dental hygiene, personal safety, pregnancy warnings, child abuse, AIDS prevention, safe driving practices, insurance, financial security, sun exposure, climate change, food additives, social embarrassment, motorcycle helmets, anti-drug abuse, immunization, smoke detectors, cell phones, safe sex, stress, and regular health exams. Specific advertising examples of fear appeals include Michelin tires and the baby, Talon zippers and "gaposis," Wisk and ring around the collar, Bayer aspirin and heart attack prevention, drug use portrayed as eggs frying in the pan, J&J Advanced Care cholesterol test product, fear of gun crime to disarm the American public, Christianity and God's punishment for sin, and World Wildlife Federation's "Don't buy exotic animal souvenirs."

The use of fear appeals is common in many types of marketing communications. Huhmann and Brotherton (1997) have conducted a content analysis of popular magazine advertisements. They found that of 2,769 magazine ads examined, 131 contained fear appeals (4.8%). This was less often than other types of appeals: testimonials (11%), humor (10.8%), comparisons (10%), and sexual appeals (8.6%). But, it was more often than aesthetic appeals (4.1%) or before/after appeals (4%). While this study was done on magazine ads, it should be remembered that television serves the largest audiences of any mass media and is the primary source of information for many Americans (Abernethy and Wicks, 1998). With regard to television, fear appeals are perhaps the most common tactic used in public service announcements (PSAs). In these PSAs, threats of physical harm, injury, and death are used more frequently than social threats (Treise, Wolburg, and Otnes, 1999). More recently, fear appeals have been tested in terms of information security behaviors. Fear appeals impact end-user behavior but not uniformly as perceptions of self-efficacy, response efficacy, threat severity, and social influence also impact end users. (Johnston and Warkentin, 2010; Elliott, 2003; Eadie, MacKintosh, and MacAskill, 2009)

Fear can be an effective motivator. "In the typical fear appeal context, fright and anxiety in the target audience can result because danger to themselves is perceived by members of the audience" (Bagozzi and Moore, 1994, 56). In fact, stronger fear appeals bring about greater attitude, intention, and behavior changes. That is, strong fear appeals are more effective than weak fear appeals (Higbee, 1969). In addition, fear appeals are most effective when they provide (1) high levels of a meaningful threat or important problem and (2) high levels of efficacy or the belief that an individual's change of behavior will reduce the threat or problem. That is, fear appeals work when you make the customer very afraid and then show him or her how to reduce the fear by doing what you recommend. (Witte and Allen, 2000) However, too much fear can lead to dysfunctional anxiety (Higbee, 1969). In general, there is a direct relationship between low to moderate levels of fear arousal and attitude change (Krisher, Darley, and Darley, 1973). Weak fear appeals may not attract enough attention but strong fear appeals may cause an individual to avoid or ignore a message by employing defense mechanisms. Importantly, extreme fear appeals generally are unsuccessful in bringing about enduring attitude change. (Ray and Wilkie, 1970)

The literature seems to support the current practice of using high levels of fear in social advertising. High fear should be the most effective providing that the proposed coping response to the threat is feasible and within the consumer's ability. However, because of ethical concerns regarding the use of fear appeals, alternatives also are suggested that can be used in lieu of fear appeals, i.e., positive reinforcement appeals aimed at the good behavior, the use of humor, and the use of post-modern irony for the younger audience. O'Keefe and Jensen (2008) suggest that gain-framed or positive appeals generally are more engaging than loss-framed or negative appeals. Gain-framed appeals appear never to be dependably less engaging, despite the greater strength of negative information and the greater engagingness of fear-inducing messages. (Hastings, Stead, and Webb, 2004)

Historically, fear appeals have been researched from the vantage point of four dimensions: (1) degree – high vs. low emotional arousal, (2) type – physical or social discomfort, (3) positioning – appeals describe undesirable actions leading to negative consequences or appeals describe desirable actions leading to avoidance of negative consequences, and (4) execution style (e.g., slice of life, testimonial) (Stern, 1988). For example, Tanner, Hunt, and Eppright (1991) have found that the severity of the threat, the

possibility of occurrence, coping response efficacy, and self-efficacy should be considered when developing fear appeals. Bagozzi and Moore (1994) have noted additional mediating variables: internal control of reinforcements, self-monitoring, attitudes toward the ad, sensory mode preference, media, product, and involvement. In addition, fear appeals have been found to be moderated by source credibility, interest, value of communication, relevance, and ethics (Quinn, Meenaghan, and Brannick, 1992). Schoenbachler and Whittler (1996) have further elaborated on sensation seeking and adolescent egocentrism as mediating variables in the response to fear appeals. One important conclusion is that although fear is a motivator for some people, the fear resides in the individual rather than in the message content (Denzin, 1984). As noted by Ruiter, Abraham, and Kok (2001, 613), "fear arousal is less important in motivating precautionary action than perceptions of action effectiveness and self-efficacy. Moreover, perceived personal relevance may be critical to the emotional and cognitive impact of threat information." The precautionary information or reassurance in the message, rather than the capacity to arouse fear, is likely to have the greatest impact on behavior, especially given that fear may inhibit the establishment of precautionary motivation through the instigation of fear control processes. As can be seen, many direct and mediating variables seem to impact fear appeals.

Based on over 50 years of fear appeal research, Nabi, Roskos-Ewoldsen, and Carpentier (2008, 191) state that a "fear appeal should contain threat and efficacy information sufficient to both evoke fear and inform about adaptive behavioral responses." For example, Cohen, Shumate, and Gold (2007) identified the types of advertisements that are most likely to be utilized in national and statewide anti-smoking campaigns in the Media Campaign Resource Center (MCRC). They found that anti-smoking advertising relied overwhelmingly on appeals to attitudes. Some 61% of advertisements mentioned the benefits of not smoking while 17% mentioned the barriers. The consequences of smoking were mentioned more than the viewer's self-efficacy. In a similar vein, Gallopel-Morvan, Gabriel, and Gall-Ely (2011) found that tobacco fear appeals need to be combined with self-efficacy and cessation support messages since they provoke avoidance reactions. Rather than using sadness, fear, or anger appeals, ads were more likely to use informational and humor appeals. (Leventhal, 1970; Mongeau, 1998; Witte, 1992; Myers, 2011)

THEORIES OF FEAR APPEALS

The beginning of the fear appeal literature can be traced to the use of communication-persuasion models (Hovland, Janis, and Kelley, 1953; McGuire, 1980). McGuire's (1980) model depicts 10 processes that may mediate the persuasion effect: "(1) must be exposed to the label; (2) given exposure, must attend to the message and (3) react affectively; (4) must comprehend the information provided in the message and (5) believe what the message says; (6) stores the information after initial instant of exposure; (7) when the moment to act arrives, retrieves the information; (8) decides on the action to be taken; (9) behaves according to the decision; and (10) anchors the beliefs." (Hankin, Firestone, Sloan, Ager et al., 1993, 11) From there, Leventhal (1970) and Rogers (1983) found that fear-arousing messages can be effective when "(1) the message is credible as it warns that if the current behavior continues, the probability of negative health consequences is high, and (2) the warning also provides the person an effective method of changing behavior that guarantees protection from the predicted aversive health outcome." (Hankin et al., 1993, 11)

In continuing to understand the use and effectiveness of fear appeals, several theories or models have been postulated: (1) Drive Reduction Model (Hovland, Janis, and Kelley, 1953; Janis and Fesbach, 1953; Janis, 1967; Ray and Wilkie, 1970; Keller, 1999; Schmitt and Blass, 2008), (2) Parallel Response Model or Parallel Process Model (PPM) (Leventhal, 1970) and Extended Parallel Process Model (EPPM) (Witte, 1992, 1994; Maloney, Lapinski, and Witte, 2011; Witte and Morrison, 2000; Morrison, 2005; Ordonana, Gonzalez-Javier, Espin-Lopez, and Gomez-Amor, 2009), (3) Protection Motivation Theory (PMT) (Rogers, 1975, 1983; Tanner, Hunt, and Eppright, 1991; Arthur and Quester, 2004; LaTour and Tanner, 2003; Van Huyssteen, 2010), (4) Multidimensional Arousal Model or Activation Theory (Thayer, 1967, 1978, 1986, 1996), (5) Mood-Congruent Learning Effect (Bower, Gilligan, and Monteiro, 1981), (6) Situational Theory of Publics (Grunig, 1989; Grunig and Grunig, 1989), (7) U.S. Public Health Service Belief Model (Janz and Becker, 1984), (8) Transtheoretical Model (Prochaska, DiClemente, and Norcross, 2002; Prochaska and DiClemente, 1984), (9) General Theory of Emotion and Adaptation (Lazarus, 1991), (10) Transactive Model of Attitude Accessibility (Roskos-Ewoldsen, 1997), (11) Terror Management Theory (TMT) (Greenberg, Pyszczynski, and Solomon, 1986; Shehyar and Hunt, 2005; Hunt and Shehyar, 2011), (12) Four-Stage Information Processing Model (Glascoff, 2001), (13) Heuristic-Systematic Model (HSM) (Averbeck, Jones, and Robertson, 2011), and (14) Affective Intelligence Theory (Marcus, Neuman, and MacKuen, 2000; Marcus and MacKuen, 1993; Ridout and Searles, 2011). Each of these theories or models is presented below.

1. Drive-Reduction Model (Hovland, Janis, and Kelley, 1953; Janis and Fesbach, 1953; Janis, 1967; Ray and Wilkie, 1970; Keller, 1999; Schmitt and Blass, 2008)

   The drive-reduction model (Hovland et al., 1953; Janis, 1967; Ray and Wilkie, 1970) conceptualizes fear as a drive state that motivates individuals to adopt recommendations expected to alleviate the unpleasant state. As noted by Keller (1999, 1404),

   > "the persuasiveness of fear appeals can be enhanced if the message arouses 'a level of fear sufficiently intense to constitute a 'drive state' and if the recipient's elaboration of the communicator's 'reassuring recommendation' was accompanied by a reduction in emotional tension. The drive-reduction model of fear appeals is based on two assumptions: (a) that when fear is sufficiently intense, it motivates instrumental responding, and (b) that any cognitive or behavioral response that reduces a negative state such as fear is inherently reinforcing. The first assumption is based on the premise that a low level of fear arousal will not sufficiently motivate the recipient to seek a method to reduce the fear. The second assumption suggests that a message containing recommendations on the appropriate cognitive or behavioral responses to reduce fear will be viewed favorably. The first assumption pertains to the relationship between level of fear arousal and persuasion; the second assumption speaks to the order of the health consequences and the recommendations."

   Rossiter and Thornton (2004) strongly support the fear drive theory. However, they add that the overall level of fear needs to be measured as well as the fear pattern of an ad. That is, they measured the fear pattern of the ad, based on moment-to-moment ratings of fear-to-relief taken for the ad's duration. They found that "a post-exposure overall rating of fear is in fact measuring the maximum level of fear experienced, not

the average level, and that this static rating of fear cannot distinguish very different patterns, such as the pattern of rising fear with no relief, the 'shock' pattern of sudden fear with no relief (both representing positive punishment), and the classic fear-relief pattern (the drive reduction pattern)." (945)

2. Parallel Response Model or Parallel Process Model (PPM) (Leventhal, 1970) and Extended Parallel Process Model (EPPM) (Witte, 1992, 1994; Maloney, Lapinski, and Witte, 2011; Witte and Morrison, 2000; Morrison, 2005; Ordonana, Gonzalez-Javier, Espin-Lopez, and Gomez-Amor, 2009)

The extended parallel process model (EPPM) is based on Leventhal's (1970) danger control/fear control model, i.e., parallel response model. The parallel response model points out that the relationship between the emotional response of fear and persuasion is positive and linear. However, fear appeals that are too weak or too strong may be avoided or ignored, i.e., the boomerang effect. As such,

> "the purpose of the EPPM is to explain why fear appeals fail to re-incorporate fear as a central variable and to specify the relationship between threat and efficacy in propositional forms. By consolidating the earlier theoretical view of Janis (1967), Leventhal (1970), and Rogers (1975, 1983), the EPPM argues that fear leads to message rejection and that cognitions, such as perceived threat and efficacy, lead to message acceptance. Threat determines the intensity of response, whereas efficacy determines the nature of the response." (Witte, 1992, 329)

Witte (1994) tested the EPPM and found general support for the model. The author found that "(1) the emotion fear is associated with fear control responses and is not directly related to danger control responses, (2) perceptions (or cognitions) about the recommended response are associated with danger control responses and unrelated to fear control responses, and (3) when efficacy beliefs are strong, perceived threat mediates the relationship between the emotion fear and behavior" (Witte, 1994, 113). Cognitions appear to lead to fear appeal success (i.e., changes in attitude, intention, and behavior) by way of the danger control processes. At the same time, the emotion fear leads to fear appeal failure or defensive reaction by way of the fear control processes. The EPPM reinforces the idea that fear appeals can be effective persuasive devices if they generate strong perceptions of threat and fear and if they also generate strong perceptions of efficacy with regard to a recommended response. (Morman, 2000)

In a further extension of the EPPM, Witte and Morrison (2000) found that an individual's inherent level of anxiety influences how one perceives both the threat and the efficacy of recommended responses. Trait anxiety/repression-sensitization, however, appears to have no effect either directly, indirectly, or interactively on attitudes, intentions, behaviors, perceived manipulation, or message derogation. On the other hand, defensive avoidance appears to be directly related to one's characteristic level of anxiety.

In regard to the EPPM, Carrera, Munoz, and Caballero (2010) found that negative emotional appeals do not always help to reduce risky behavior. They found that a mixed sequential (negative-positive) emotional message generated lower post-message discomfort than the negative one. Also, the participants were motivated to

control the danger. However, a purely negative message reported more discomfort and higher probability of performing the risk behaviors.

In general, an effective health-risk message has been shown to be based on guidelines which include all of the information for individuals to make well-informed decisions, just enough threat to motivate actions, and feasible solutions to enhance patients' perceived efficacy to combat the illness. That is, a PSA with a fear appeal message with feasible treatments and solutions to the problem can enhance communications and compliance of recommended behavior. (Siu, 2010)

3. Protection Motivation Theory (PMT) (Rogers, 1975, 1983; Tanner, Hunt, and Eppright, 1991; Arthur and Quester, 2004; LaTour and Tanner, 2003; Van Huyssteen, 2010)

The protection motivation theory (PMT) (Roger's, 1975, 1983; Tanner, Hunt, and Eppright, 1991) is borrowed from psychology and has been adapted to predict people's behavioral intentions. The PMT examines the cognitive processes by which fear impacts persuasion. The premise of PMT is that people are motivated to protect themselves from physical, psychological, and social threats. Response to a threat is based on two cognitive processes: (1) threat appraisal (assessment of the individual's personal risk of harm and severity of harm) and (2) coping appraisal (individual's perceptions of the recommended response's efficacy and an assessment of his or her ability to carry out this response). The model focuses on the cognitive/rational reactions or coping responses to fear appeals and points out that "fear may be considered a relational construct, aroused in response to a situation that is judged as dangerous and toward which protective action is taken" (Rogers, 1983, 93). That is, the fearful content of the message motivates the individual to think about ways of protecting himself, and change is not driven by feelings of fearfulness alone (Roser and Thompson, 1995). Accordingly, PMT postulates that a fear/threat appeal initiates two cognitive processes: threat appraisal and coping appraisal wherein four stimulus variables are evaluated: (1) severity of the threat, (2) probability that the event will occur if no adaptive behavior is performed, (3) availability and effectiveness of a coping response that might reduce the threat, and (4) self-efficacy or the individual's perceived ability to carry out the coping behavior. Self-efficacy may be the most important dimension (Leventhal, Watts, and Pagano, 1967). Additionally, Bandura (1977) has proposed that three factors influence one's feeling of self-efficacy: actual experience, vicarious experience, and verbal persuasion. However, ads typically do little to enhance one's self-efficacy (Hunt, Fransway, Reed, Miller, Jones, Swanson, and Yunginger, 1995)

As such, PMT theorizes that a fear appeal will provide an impetus for the individual to assess the severity of the event, probability of the event's occurrence, and belief in the efficacy of the message's recommendations. These three factors arouse "protect motivation" which then provides the incentive for change. (Keller, 1999) Accordingly, PMT does help to explain the boomerang effect. That is, if individuals are threatened but have no effective way to protect themselves, then persuasion and intentions to change behavior are expected to be very low. In this case, the individual will resort to denial, avoidance, and wishful thinking. (Roser and Thompson, 1995)

Tanner, Hunt, and Eppright (1991) have further developed the role of social context on implications of the coping response to a fear or threat communication. The authors note that responses may be due to factors other than the communication itself and emphasize the role of emotion. That is, while Roger (1983) has assumed that coping responses are derived from the fear communication itself, Tanner, Hunt, and Eppright (1991) have added the premise that individuals may have knowledge or prior experience that gives them coping responses.

4. Multidimensional Arousal Model or Activation Theory (Thayer, 1967, 1978, 1986, 1996)

In general, fear appeals assume that some form of arousal is necessary for an individual's behavior to change. Thayer (1967, 1978, 1986) examined the underlying psychophysiological process and affective response to arousing advertising stimuli. He viewed arousal as being composed of four dimensions: tension, energy, calmness, and fatigue. He introduced energy arousal as a function of the psychophysiological response associated with feelings of "pep" whereas tension arousal reflects tenseness and jittery feelings. Supposedly, a nonexcessive stimulus causes tension that triggers a person's energy arousal, i.e., tension generates energy. However, if tension is excessive, then energy will be diminished. Or, energy produces positive feelings while high levels of tension produce negative feelings.

Additionally, Thayer (1996) proposed that mood is based on information we receive from our bodies about energy level and tension. He further stated that much of human behavior is geared toward regulating mood toward pleasant mood states and away from unpleasant ones. That is, a nonexcessive fear appeal will cause tension which generates energy which triggers a positive feeling toward the ad. If tension is increased beyond a threshold, then it will generate anxiety which results in dissipated energy which in turn produces negative feelings, i.e., an explanation for the boomerang effect.

Henthorne, LaTour, and Nataraajan (1993) examined tension and energy dimensions as responses to print ads. They discovered that a strong threat print ad generated more tension and energy feelings and performed better than a mild threat ad. The premise was that as long as the tension level does not cross a hypothetical threshold, it will generate energy and result in positive feelings toward the ad stimulus. Consequently, energizing potential customers to take action should be of utmost importance in designing fear appeals.

Viljoen, Terblanche-Smit, and Terblanche (2010) replicated this result with the additional contribution that language differences in a target audience, even if they are from the same country, could necessitate different approaches that should be carefully considered to maximize effect. That is, language differences can affect the arousal of fear in an individual.

5. Mood-Congruent Learning Effect (Bower, Gilligan, and Monteiro, 1981)

According to Bower, Gilligan, and Monteiro (1981), "individuals who show a positive affect toward some elements at the learning stage will recall those elements better than they will recall other elements (the mood-congruent learning effect). Emotional states are represented as knots in the memory system that form an intricate and elaborate network and are related to expressive behaviors, verbal labels, inductive stimuli, and past events" (Chebat, Laroche, and Filiatrault, 1995, 425). It appears that

positive material is more integrated within memory and can trigger a wide range of associations. Elements that are associated with negative effects such as fear may be stored in relative isolation from other elements causing fear to stimulate very few thoughts relative to fear. On the other hand, the brain may be ordered by degree of fear or danger. In this case, events that are associated with greater levels of fear or danger will cause a reaction wherein stimuli may flood and even over-stimulate the system(s). This may explain why masking attempts of fear on memorization may be curvilinear. From another perspective, fear is both a drive and a cue. As such, fear may be acting as a cue below the threshold and as a drive above the threshold. (Chebat, Laroche, and Filiatrault, 1995)

6. Situational Theory of Publics (Grunig, 1989; Grunig and Grunig, 1989)

   The situational theory of publics (Grunig, 1989, Grunig and Grunig, 1989) explains differences in message processing and response among different segments of the public facing a similar problem. This theory distinguishes between individuals who organize and take action and individuals who remain apathetic. The author states that three individual characteristics (problem recognition, involvement, and constraint recognition) influence information seeking, message process and retention, attitude formation, and behavioral responses. Grunig and Grunig (1989, 103) suggests three basic patterns of publics: "(a) latent publics are low in problem recognition and involvement; (b) aware publics are high in problem recognition, but vary in involvement and constraint recognition; and (c) active publics are high in problem recognition and involvement and low in constraint recognition." The author found that active publics seek and retain information, form attitudes, and take action. Over 60% of the latent public segment will passively or superficially process information on an issue. As such, Roser and Thompson (1995) suggest that fear appeals may be effective for audiences who are relatively low in prior involvement, i.e., using high fear appeals may generate high emotional arousal among audience members.

7. U.S. Public Health Service Belief Model (Janz and Becker, 1984)

   The health belief model (Janz and Becker, 1984) was first developed by social psychologists in the early 1950s to understand why people were not accepting disease preventatives, screening tests, clinic visits, and medication compliance.

   > "The model hypothesized that behavior depends mainly on two variables: (1) the value placed by an individual on a particular goal, and (2) the individuals' estimate of the likelihood that a given action will achieve that goal. These variables conceptualized in the context of health-related behavior, are (1) the desire to avoid illness (or to get well); and (2) the belief that a specific health action will prevent (or ameliorate) illness (i.e., the individual's estimate of the threat of illness, and of the likelihood of being able, through personal action to reduce that threat)" (Agrawal, 1995, 100).

   The model focuses on the influence of perceived susceptibility, perceived severity, perceived benefits, and perceived barriers. Janz and Becker (1984) found the model to have high validity.

8. Transtheoretical Model (Prochaska, DiClemente, and Norcross, 2002; Prochaska and DiClemente, 1984)

The transtheoretical model (Prochaska, DiClemente, and Norcross, 2002; Prochaska and DiClemente, 1984) initially proposed six stages of change as a general model of intentional behavior change. The six stages individuals go through to successfully change are: (1) precontemplation (denial or unawareness of the need for change), (2) contemplation (recognition begins to dawn that an individual may want/need to change), (3) determination (an individual decides to change and begins to make plans and envisions the future), (4) action (individual starts to participate in the modified behavior), (5) maintenance (it can take a long time to change behavior, so training is important here), and (6) recycling (relapses are common so an individual needs ongoing support and training). Not all individuals are at the same point of adopting a specified new behavior. As a consequence, rather than being a linear process, most people cycle back through these stages before being able to eventually change their behavior. The first three stages are more motivational while the last three stages are action based. (Prochaska, DiClemente, and Norcross, 2002; *HR Focus*, 2002; Hutchison, Breckon, and Johnston, 2009)

9. General Theory of Emotion and Adaptation (Lazarus, 1991)

    Lazarus' (1991) model proposes that appraisal processes of internal and situational conditions lead to emotional responses which in turn lead to coping activities. That is, appraisals lead to emotional responses which lead to coping. The author hypothesized that appraisal results in three possible outcomes: biological urges to act, subjective affect, and physiological responses. These three outcomes determine which emotion will result from an appraisal. Coping responses are two-fold: (1) problem-focused coping focuses on reducing the problem or undesirable situation (e.g., physical change, breaking off relationship, and persuasion) and (2) emotion-focused coping focuses on cognitive strategies to master, reduce, or tolerate an undesirable situation (e.g., denial, avoidance thinking, reconceptualization). That is, if information in a fear appeal is appraised as having significance for the individual's well-being, it becomes "hot information" and subsequent processing will occur; or, ads are perceived in emotion-laden terms. For example, exposure to fear appeal stimuli may produce the negative emotion of fear which results in the viewer coping with the fear through emphatic responses and a decision to help. (Bagozzi and Moore, 1994) Bagozzi and Moore (1994) also found that more emotionally intense ads stimulated a strong desire to help. These high-impact ads may require fewer exposures to evoke strong emotions and stimulate empathy. But, the advertiser will need to examine these ads for early wear-out and possibly negative attitudes toward the ad and sponsor. As concluded by Nabi, Roskos-Ewoldsen, and Carpentier (2008, 200), "subjective knowledge impacts the degree of emotional response to fear appeals, and knowledge and fear level (either as a function of message design or not) can under certain conditions, interact such that knowledgeable people may be more receptive to messages that are designed to be less emotionally arousing." Cognitive and emotional processes are mutually engaged and mutually supportive rather than antagonistic. That is, individuals seem to use emotions as tools for efficient information processing and this enhances their abilities to engage in meaningful deliberation (Marcus and MacKuen, 1993).

10. Transactive Model of Attitude Accessibility (Roskos-Ewoldsen, 1997)

Exposure to low to moderate fear-inducing messages can be effective in promoting behaviors. In particular, a message promoting the efficacy of the adaptive behavior results in more positive attitudes toward the adaptive behavior regardless of the level of threat in the message. High efficacy messages result in more accessible attitudes toward the adaptive behavior. The Transactive Model of Attitude Accessibility posits that the accessibility of the attitude toward the adaptive behavior predicts the participants' behavioral intention to perform the adaptive behavior. A high threat message appears to decrease the accessibility of the participant's attitude toward the threat. Individuals are more likely to orient their attention to an object if they have an accessible attitude toward that object, and they are more likely to act in accord with an accessible attitude. That is, appeals that increase the accessibility of the attitude toward the behavior are more likely to strengthen intentions to perform the adaptive behavior. It should be noted that accessing an attitude may be positive or negative. If individuals access an attitude of close-mindedness or inflexibility, they may be unlikely to update their attitudes as new information becomes available. (Roskos-Ewoldsen, Yu, and Rhodes, 2004)

11. Terror Management Theory (TMT) (Greenberg, Pyszczynski, and Solomon, 1986; Shehryar and Hunt, 2005; Hunt and Shehryar, 2011)

Humans are instinctively programmed to self-preserve, and they have the cognitive capacity to be self-aware. With the awareness of self and non-self, humans are able to be aware of death. TMT posits that this understanding of death combined with the instinctive drive for self-preservation engenders a vast potential for terror. The resulting terror from realizing our own mortality is paralyzing. Self-esteem and cultural worldviews act as anxiety buffers to protect the individual from the potential for existential terror. Self-esteem and cultural worldviews coat the universe with order and meaning by providing standards of value that promise protection and death transcendence to those who meet these standards of value. Any attempt to weaken a person's worldview would lead to negative feelings towards the attacker. Upholding the cultural values strengthens the worldview while going against these values threatens the worldview. According to Hunt and Shehryar (2002, 53),

> "It is this distinction between death and other noxious appeals that has potential implications for fear appeal research. If death-related fear appeals make mortality salient, subjects are likely to increase their faith in their worldviews in order to assuage the fear of death. From a social marketer's perspective, if the desired attitude change contradicts a recipient's existing worldview (for instance, an anti-drinking and driving message to someone whose cultural worldview includes drinking alcohol), the recipient is likely to defend his/her existing worldview even if it is distorted thus mitigating the desired effectiveness of the advertisement."

That is, fear aroused through death-related threats seems to produce increased defense of cultural worldviews in highly ego-involved individuals. When threatened with death, the extent to which an individual derives self-esteem from an attitude or behavior will predetermine the extent to which that attitude or behavior will be defended. Social marketers need to consider the level of ego-involvement carefully when designing fear appeal ads. (Greenberg, Pyszczynski, and Solomon, 1986; Hunt and Shehyar, 2002; Hunt and Shehyar, 2011) That is, ads that focus on mortality-

related risks may inadvertently make mortality salient. In turn, this actually may precipitate the very behaviors which they aim to reduce amongst those who construe the behavior as beneficial for self-esteem. It is possible that the inclusion of self-esteem messages may help to augment the ad's effectiveness. (Jessop and Wade, 2008)

12. Four-Stage Information Processing Model (Glascoff, 2001)

    Glascoff's (2001) model consists of four information processing stages: (1) preattention, (2) focal attention, (3) comprehension, and (4) elaboration/assessment. The author discusses four points in the model wherein individuals may stop intended messages from being received effectively. The first stop-point is attention avoidance or not going from pre-attention to focal attention. The second roadblock is blunting or the avoidance of comprehension which may occur when anxiety-producing words start a defensive reaction. The third hindrance is suppression or the avoidance of inference, that is, when the received information is not applied. The fourth block is counter-argumentation which is the conscious rejection of the message content by the individual. The author states that "fear-appeal type messages will be most effective if they are interesting, attention-capturing, culturally sensitive, and cause the recipients to initially feel good about themselves, later sensitize themselves to their own risk, and then have their myths dispelled." (40)

13. Heuristic-Systematic Model (HSM) (Averbeck, Jones, and Robertson, 2011)

    Conceived in the persuasion literature, the Heuristic-Systematic Model explains that individuals are driven to hold accurate attitudes. The model postulates that

    > "Because of environmental and cognitive constraints, individuals must be sufficiently motivated to attend to the content of a specific message. Individuals will process information until a sufficiency threshold is met. Heuristic processing will be used first, but when this is insufficient, individuals will use systematic processing to meet the sufficiency threshold…When there is a lack of information about a topic, a heuristic can be extremely useful…When an individual is very knowledgeable about a specific issue, the arguments presented in a persuasive message can be carefully assessed via systematic processing…Systematic processing involves 'considerable cognitive effort' and careful attention to the information presented in a given message…Heuristic processing, on the other hand, involves cognitive shortcuts developed by the individual. While systematic processing can rely on the whole spectrum of information about a specific topic, heuristic processing 'may involve the use of relatively general rules (scripts, schemata) developed by individuals through their past experiences' to guide the decision-making process." (Averbeck, Jones, and Robertson, 2011, 36-37)

    The relative strength of an attitude that is based on prior experience and knowledge is a necessary consideration of whether one will systematically or heuristically process a message. One can manipulate the knowledge level of or attitude toward the subject by utilizing novel or relatively unknown topics. The two routes of systematic and heuristic processing seem to be antagonistic when the message content arouses negative emotions. (Averbeck, Jones, and Robertson, 2011)

14. Affective Intelligence Theory (Marcus, Neuman, and MacKuen, 2000; Marcus and MacKuen, 1993; Ridout and Searles, 2011)

    Affective Intelligence Theory is the dominant affective theoretical model in political science as expounded by Marcus, Neuman, and MacKuen (2000). It focuses on the consequences of emotion in its attempt to understand the use of emotion in information processing and political campaigns. Emotional response is categorized by its relation to one of two systems: disposition system and surveillance system. The disposition system relies on habits while the surveillance system encourages increased attention to stimuli. Surveillance system emotions fall along an anxious-calm continuum which includes the experience of fear or anxiety. Fear leads to heightened attention to the object responsible for the fear which leads to searching for information about the object. In general, Affective Intelligence Theory suggests that fear should lead to involvement and information processing, reducing the role of habit in the process. The disposition system identifies successful behaviors, relates these behaviors to the object, and invokes either happiness/sadness (hope, enthusiasm, pride, sadness) or aversion (contempt, hatred, anger). These routine behaviors and emotions can be reinforced. Anger and anxiety seem to represent distinct dimensions of emotion with anger being triggered by affronts to an individual's core beliefs under certainty. Anxiety results from either vague or definitive threats under circumstances of uncertainty, which may promote a search for more information. Affective Intelligence Theory works fairly well in predicting the use of fear, enthusiasm, and pride appeals, but, not so well in predicting anger appeals. (Ridout and Searles, 2011) Cognitive and emotional processes are mutually engaged and mutually supportive rather than antagonistic. Individuals seem to use emotions as tools for efficient information processing and this enhances their abilities to engage in meaningful deliberation (Marcus and MacKuen, 1993).

OVERALL FINDINGS FROM THE FEAR APPEAL THEORIES AND LITERATURE

Each of these fear appeal theories or models presents some useful distinctions. Overall, the following generalizations are offered with regard to the current status of fear appeal theory and literature.

1. When people feel fearful, they are motivated to reduce the fear, threat, or danger.
2. Fear appeals are built upon fear. That is, they identify the negative results of not using a product or the negative results of engaging in unsafe behavior.
3. The use of fear appeals generally is effective in increasing interest, involvement, recall, and persuasiveness by potentially causing distress to the target audience.
4. In general, the more frightened a person is by a fear appeal, the more likely he or she is to take positive preventive action.
5. Overall, there is a curvilinear relationship between fear intensity and change in the target audience. If the fear is too low, it may not be recognized. If it reaches a threshold that is too high, the individual may engage in denial and avoidance.
6. When tension becomes too high, fear appeals seem to become less effective. That is, high tension leads to energy depletion and negative mood. In addition, ads that focus on mortality-related risks may inadvertently make mortality salient and turn off the audience members who, in turn, are desperately trying to save their core worldviews.

7. An individual's response to a threat is based on two cognitive processes: threat appraisal and coping appraisal.
8. A fear appeal should contain threat and coping efficacy information sufficient to both evoke a manageable level of fear and inform about adaptive behavioral responses.
9. Fear appeals will not be successful if the individual feels powerless to change the behavior.
10. Fear appeals are most effective when they provide (1) moderate to high levels of meaningful threat and (2) high levels of self-efficacy or the belief that an individual's behavior change will reduce the threat, and can be attainable by him or her.
11. Fear appeal effectiveness also depends on the individual's characteristics, language, cultural orientation, stage of change, attitudes, and goals.
12. For example, individuals highly involved and ego-involved in a topic can be motivated by a relatively small amount of fear. A more intense level of fear is required to motivate uninvolved individuals and those that are not ego-involved.
13. Behavior depends on the value an individual has placed on a particular goal and the individual's assessment of the likelihood that a given action will achieve the goal.
14. As such, fear is both a drive and a cue in that fear may be acting as a cue below the threshold and as a drive above the threshold.
15. Demographics also influence fear appeal effectiveness, e.g., age, sex, race, and education.
16. Individuals with high self-esteem react more favorably to high levels of fear than do people with lower self-esteem. Lower self-esteem individuals are more persuaded by low levels of fear.
17. Emotionally intense, high-impact ads may require fewer exposures to evoke strong emotions and stimulate empathy. But, subjective knowledge impacts the degree of emotional response to fear appeals, e.g., knowledgeable people may be more receptive to messages that are designed to be less emotionally arousing.
18. Cognitive and emotional processes are mutually engaged and mutually supportive rather than antagonistic. Individuals seem to use emotions as tools for efficient information processing and this enhances their abilities to engage in meaningful deliberation.
19. The more vulnerable an individual feels, the less effective a fear appeal.
20. Defensive avoidance appears to be directly related to one's characteristic level of anxiety.
21. Fear-appeal messages will be most effective if they are interesting, attention-capturing, novel, relatively unknown topics, culturally sensitive, and cause the recipients to initially feel good about themselves, later sensitize them to their own risk, and then have their unhealthy point-of-view dispelled with empowerment.
22. While these are the general findings regarding fear appeals, many moderating variables have been studied with varying results, e.g., values and beliefs, prior knowledge and experience, aware vs. latent publics, presence of addictive behavior, what is "hot information" for the individual, whether it is a direct or indirect fear appeal, and the information processing capability of the individual.
23. In spite of these general conclusions, there remains a considerable question as to whether or not the use of fear appeals is ethical and how to make a fear appeal more ethical.

SUMMARY

Fear appeals have been used successfully to increase advertising's effect on consumer interest, recall, persuasiveness, and behavior change. However, the inner workings of a fear appeal have not been fully agreed upon or understood. The purpose of this paper has been to review and examine the fear appeal theories and literature. In particular, emphasis was given to defining a fear appeal and examining the use of fear appeals. Thereafter, fourteen theories of fear appeals were presented with overall findings derived from these theories and literature. In essence, the bottom line of fear appeals is that they work; threatening information does motivate people to safer and recommended behavior. Based on over 50 years of fear appeal research, a fear appeal should contain threat and efficacy information sufficient to both evoke fear and inform about adaptive behavioral responses. In addition, Hastings, Stead, and Webb (2004) state, "there are genuine concerns about the broader marketing implications of fear appeals, and they may breach the Hippocratic injunction of 'First, do no harm'." In response, a continued understanding of fear appeal theory and literature can contribute first to doing no harm and second to more effective advertising practice.

REFERENCES

---------- (2002). Coaching Employees through the 'Six Stages of Change.' *HR Focus*, 79(5), 9+.

Abernethy, A. M. and Wicks, J. L. (1998). Television Station Acceptance of AIDS Prevention PSAs and Condom Advertisements. *Journal of Advertising Research*, 38(5), 53-62.

Agrawal, M. (1995). Warning Labels: The Role of Expertise and Perceived Risk in Pharmaceutical Purchase Behavior. *Health Marketing Quarterly*, 13(2), 99+.

Arthur, D., and Quester, P. (2004). Who's Afraid of That Ad? Applying Segmentation to the Protection Motivation Model. *Psychology & Marketing*, 21(9), 671-684.

Averbeck, J. M., Jones, A. and Robertson, K. (2011). Prior Knowledge and Health Messages: An Examination of Affect as Heuristics and Information as Systematic Processing for Fear Appeals. *Southern Communication Journal*, 76(1), 35-54.

Bagozzi, R. P. and Moore, D. J. (1994). Public Service Advertisements: Emotions and Empathy Guide PSAs. *Journal of Marketing*, 58(1), 56+.

Bandura, A. (1977). Self-Efficacy: Toward a Unifying Theory of Behavioral Change. *Psychological Review*, 84, 191-215.

Begley, S., Underwood, A., Wolffe, R., Smalley, S. and Interlandi, J. (2007). The Roots of Fear. *Newsweek*, 150(26), 36-40.

Bower, G.H., Gilligan, S. G. and Monteiro, K. R. (1981). Selectivity of Learning Caused by Affective States. *Journal of Experimental Psychology*, 110, 451-473.

Carrera, P., Munoz, D. and Caballero, A. (2010). Mixed Emotional Appeals in Emotional and Danger Control Processes. *Health Communication*, 25(8), 726-736.

Cauberghe, V., De Pelsmacker, P., Janssens, W. and Dens, N. (2009). Fear, Threat and Efficacy in Threat Appeals: Message Involvement as a Key Mediator to Message Acceptance. *Accident Analysis & Prevention*, 41(2), 276-285.

Chebat, J. C., Laroche, D. B. and Filiatrault, P. (1995). Affect and Memory in Advertising: An Empirical Study of the Compensatory Processes. *The Journal of Social Psychology*, 135(4), 425-438.

Cohen, E. L., Shumate, M. D. and Gold, A. (2007). Anti-Smoking Media Campaign Messages: Theory and Practice. *Health Communication*, 22(2), 91-102.
Denzin, N. K. (1984). *On Understanding Emotion*, San Francisco: Jossey-Bass.
Eckart, J. (2011). Mind Control Tactic – Fear Appeal. *NLP & Hypnosis*, April 5, 1.
Eadie, D., MacKintosh, A. M., MacAskill, S. and Brown, A. (2009). Development and Evaluation of an Early Detection Intervention for Mouth Cancer Using a Mass Media Approach. *British Journal of Cancer*, 101(Supp 2), S73–S79.
Elliott, B. J. (2003). The Psychology of Fear Appeals Re-Visited. Retrieved on June 16, 2011 from http://www.rsconference.com/pdf/RS030056.pdf, 1.
Gallopel-Morvan, K., Gabriel, P. and Gall-Ely, M. L. (2011). The Use of Visual Warnings in Social Marketing: The Case of Tobacco. *Journal of Business Research*, 64(1), 7-11.
Glascoff, D. W. (2000). A Meta-Analysis of Fear Appeals: Implications for Effective Public Health Campaigns. *Marketing Health Services*, 20(4), 35+.
Glascoff, D. W. (2001). Guarding Against Threatening HIV Prevention Messages: An Information-Processing Model. *Marketing Health Services*, 21(1), 40+.
Gore, P., Madhavan, S., Curry, D., McClurg, G., et al. (1998). Persuasive Messages. *Marketing Health Services*, 18(4), 32-43.
Greenberg, J., Pyszczynski, T. and Solomon, S. (1986). The Causes and Consequences of a Need for Self-Esteem: A Terror Management Theory. In R. F. Baumeister (Ed.), *Public Self and Private Self*, pp. 189–212. New York: Springer.
Grunig, J. E. (1989). Sierra Club Study Shows Who Become Activists. *Public Relations Review*, 15(3), 3-24.
Grunig, J. E. and Grunig, L. A. (1989). Toward a Theory of the Public Relations Behavior of Organizations: Review of a Program of Research. In J. E. Grunig and L. A. Grunig (Eds.), *Public Relations Research Annual* (Vol. 1, 27-63). Hillsdale, NJ: Lawrence Erlbaum Associates.
Hankin, J. R., Firestone, I. J., Sloan, J. J., Ager, J. W., et al. (1993). The Impact of the Alcohol Warning Label on Drinking during Pregnancy. *Journal of Public Policy & Marketing*, 12(1), 10+.
Hastings, G., Stead, M. and Webb, J. (2004). Fear Appeals in Social Marketing: Strategic and Ethical Reasons for Concern. *Psychology & Marketing*, 21(11), 961-986.
Henthorne, T. L., LaTour, M. S. and Nataraajan, R. (1993). Fear Appeals in Print Advertising: An Analysis of Arousal and Ad Response. *Journal of Advertising*, 22(2), 59-68.
Higbee, K. L. (1969). Fifteen Years of Fear Arousal Research on Threat Appeals: 1953-1968. *Psychological Bulletin*, 72(6), 426-444.
Hovland, C. I., Janis, I. L. and Kelley, H. H. (1953). *Communication and Persuasion: Psychological Studies of Obvious Change.* New Haven, CT: Yale University Press.
Huhmann, B. A. and Brotherton, T. P. (1997). A Content Analysis of Guilt Appeals in Popular Magazine Advertisements. *Journal of Advertising*, 26(2), 35-45.
Hunt, D. M. and Shehryar, O. (2002). The Nature of Fear Arousal and Segmentation of Target Audience in Fear Appeal Advertising: a Terror Management Perspective. *American Marketing Association Conference Proceedings*, 13, 51-59.
Hunt, D. M. and Shehryar, O. (2011). Integrating Terror Management Theory into Fear Appeal Research. *Social and Personality Psychology Compass*, 5(6), 372-382.
Hunt, L. W., Fransway, A. F., Reed, C. E., Miller, L. K., Jones, R. T., Swanson, M. C., and Yunginger, J. W. (1995). An Epidemic of Occupational Allergy to Latex Involving

Healthcare Workers. *Journal of Occupational & Environmental Medicine*, 37(10), 1204-1209.
Hutchinson, A. J., Breckon, J. D. and Johnston, L. H. (2009). Physical Activity Behavior Change Interventions Based on the Transtheoretical Model: A Systematic Review. *Health Education Behavior*, 36(5), 829-845.
Hyman, M. R. and Tansey, R. (1990). The Ethics of Psychoactive Ads. *Journal of Business Ethics*, 9(2), 105-114.
Hyman, M. R. and Tansey, R. (1994). Research on Advertising Ethics: Past, Present, and Future. *Journal of Advertising*, 23(3), 5-15.
Janis, I. L. (1967). Effects of Fear Arousal on Attitude Change: Recent Developments in Theory and Experimental Research. *Advances in Experimental Social Psychology*, 3/e, L Berkowitz, ed., New York: Academic Press, 166-224.
Janis, I. L. and Feshback, S. (1953). Effects of Fear-Arousing Communications. *The Journal of Abnormal and Social Psychology*, 48(1), 78-92.
Janz, N. K. and Becker, M. H. (1984). The Health Belief Model: A Decade Later. *Health Education Quarterly*, 11(1), 1-47.
Jessop, D. C. and Wade, J. (2008). Fear Appeals and Binge Drinking: A Terror Management theory Perspective. *British Journal of Health Psychology*, 13(4), 773-788.
Johnston, A.C. and Warkentin, M. (2010). Fear Appeals and Information Security Behaviors: An Empirical Study. *MIS Quarterly*, 34(3), 549-A4.
Jones, M. (2010). Using Fear Appeal as a Persuasion Technique. Retrieved on June 16, 2011 from http://www.articlesbase.com/motivational-articles/using-fear-appeal-as-a-persuasion-technique-2893351.html#ixzz1PQ32D0G7, July 24.
Keller, P. A. (1999). Converting the Unconverted: The Effect of Inclination and Opportunity to Discount Health-Related Fear Appeals. *Journal of Applied Psychology*, 84(3), 403-415.
Krisher, H. P., Darley, S. A. and Darley, J. M. (1973). Fear-Provoking Recommendations, Intentions to Take Preventive Actions, and Actual Preventive Actions. *Journal of Personality and Social Psychology*, 26(2), 301-308.
LaTour, M. S., Snipes, R. L. and Bliss, S. J. (1996). Don't Be Afraid to Use Fear Appeals: An Experimental Study. *Journal of Advertising Research*, 36(2), 59-68.
LaTour, M. S. and Tanner, J. F. (2003). Radon: Appealing to Our fears. *Psychology and Marketing*, 20(5), 377–394.
Lazarus, R. S. (1991). *Emotion and Adaptation*, New York: Oxford University Press.
Lennon, R. and Rentfro, R. (2010). Are Young Adults Fear Appeal Effectiveness Ratings Explained by Fear Arousal, Perceived Threat and Perceived Efficacy? *Innovative Marketing*, 6(1), 58-65.
Leventhal, H. (1970). Findings and Theory in the Study of Fear Communications. *Advances in Experimental Social Psychology*, vol. 5, L. Berkowitz, ed., New York: Academic Press, 111-186.
Leventhal, H., Watts, J. C. and Pagano, F. (1967). Effects of Fear and Instructions of How to Cope with Danger. *Journal of Personality and Social Psychology*, 6(3), 313-321.
Lewis, I. M., Watson, B. C., Tay, R. S. and White, K. M. (2007). The Role of Fear Appeals in Improving Driver Safety: A Review of the Effectiveness of Fear-Arousing (Threat) Appeals in Road Safety Advertising. *International Journal of Behavioral and Consultation Therapy*, *3*(2), 203-222.

Maloney, E. K., Lapinski, M. K. and Witte, K. (2011). Fear Appeals and Persuasion: a Review and Update of the Extended Parallel Process Model. *Social and Personality Psychology Compass*, 5(4), 206-219.

Marcus, G. E. and MacKuen, M. (1993). Anxiety, Enthusiasm, and the Vote: The Emotional Underpinnings of Learning and Involvement during Presidential Campaigns. *American Political Science Review*, 87(3), 672-685.

Marcus, G. E., Neuman, W. R. and MacKuen, M. (2000). *Affective Intelligence and Political Judgment*. Chicago: University of Chicago Press.

Maren, S. (2008). Pavlovian Fear Conditioning as a Behavioral Assay for Hippocampus and Amygdala Function: Cautions and Caveats. *European Journal of Neuroscience*, 28(8), 1661-1666.

McGuire, W. J. (1980). The Communication-Persuasion Model and Health Risk Labeling. *Product Labeling and Health Risks*, Banbury Report 6, Louis A. Morris, Michael B. Mazis, and Ivan Barofsky, eds., Cold Spring Harbor, NY: Cold Spring Harbor Laboratory, 99-118.

Merriam-Webster (2002). *Third New International Dictionary Unabridged*, http://search.eb.com/mwu.

Mongeau, P. A. (1998). Another Look at Fear-Arousing Persuasive Appeals. In M. Allen & R. W. Preiss (Eds.), *Persuasion: Advances through Meta-Analysis*, pp. 53-68. Cresskill, NJ: Hampton Press.

Morman, M. T. (2000). The Influence of Fear Appeals, Message Design, and Masculinity on Men's Motivation to Perform the Testicular Self-Exam. *Journal of Applied Communication Research*, 28(2), 91-116.

Morrison, K. (2005). Motivating Women and Men to Take Protective Action Against Rape: Examining Direct and Indirect Persuasive Fear Appeals. *Health Communication*, 18(3), 237-256.

Myers, J. (2011). Fear Appeals and Their Impact. Retrieved on June 16, 2011 from http://issuu.com/jmyers8820/docs/fear_appeals_and_their_impact, May 10.

Nabi, R. L., Roskos-Ewoldsen, D. and Carpentier, F. D. (2008). Subjective Knowledge and Fear Appeal Effectiveness: Implications for Message Design. *Health Communication*, 23(2), 191-201.

O'Keefe, D. J. and Jensen, J. D. (2008). Do Loss-Framed Persuasive Messages Engender Greater Message Processing than Do Gain-Framed Messages? A Meta-Analytic Review. *Communication Studies*, 59(1), 51-61.

Ordonana, J. R., Gonzalez-Javier, F., Espin-Lopez, L. and Gomez-Amor, J. (2009). Self-Report and Psychophysiological Responses to Fear Appeals. *Human Communication Research*, 35(2), 195-220.

Prochaska, J.O. and DiClemente, C. C. (1984). *The Transtheoretical Approach: Crossing Traditional Boundaries of Therapy*, Homewood, IL: Dow Jones.

Prochaska, J. O., DiClemente, C. C. and Norcross, J. C. (2002). In Search of How People Change: Applications to Addictive Behavior. *American Psychologist*, 47(9), 1102-1114.

Quinn, V., Meenaghan, T. and Brannick, T. (1992). Fear Appeals: Segmentation Is the Way to Go. *International Journal of Advertising*, 11(4), 355-367.

Ray, M. L. and Wilkie, W. L. (1970). Fear: The Potential of an Appeal Neglected by Marketing. *Journal of Marketing*, 34(1), 54-62.

Ridout, T. N. and Searles, K. (2011). It's My Campaign I'll Cry if I Want to: How and When Campaigns Use Emotional Appeals. *Political Psychology*, 32(3), 439-458.
Rogers, R. W. (1975). A Protection Motivation Theory of Fear Appeals and Attitude Change. *Journal of Psychology*, 91(1), 93-114.
Rogers, R. W. (1983). Cognitive and Physiological Processes in Fear Appeals and Attitude Change: A Revised Theory of Protection Motivation. *Social Psychophysiology*, J. Cacciopo and R. Petty, eds., New York: Guilford Press.
Roser, C. and Thompson, M. (1995). Fear Appeals and the Formation of Active Publics. *Journal of Communication*, 45(1), 103+.
Roskos-Ewoldsen, D. R. (1997). Attitude Accessibility and Persuasion: Review and a Transactive Model. In B. Burleson (Ed.), *Communication Yearbook*, 20, 185-225. Beverley Hills, CA: Sage.
Roskos-Ewoldsen, D. R., Yu, H. J., and Rhodes, N. (2004). Fear Appeal Messages Affect Accessibility of Attitudes Toward the Threat and Adaptive Behaviors. *Communication Monographs*, 71(1), 49-69.
Rossiter, J. R. and Thornton, J. (2004). Fear-Pattern Analysis Supports the Fear-Drive Model for Antispeeding Road-Safety TV Ads. *Psychology & Marketing*, 21(11), 945-960.
Ruiter, R. A. C., Abraham, C. and Kok, G. (2001). Scary Warnings and Rational Precautions: A Review of the Psychology of Fear Appeals. *Psychology and Health*, 16(6), 613-630.
Schmitt, C. L. and Blass, T. (2008). Fear Appeals Revisited: Testing a Unique Anti-Smoking Film. *Current Psychology*, 27(2), 145-151.
Schoenbachler, D. D. and Whittler, T. E. (1996). Adolescent Processing of Social and Physical Threat Communications. *Journal of Advertising*, 25(4), 37-54.
Shehryar, O. and Hunt, D. M. (2005). A Terror Management Perspective on the Persuasiveness of Fear Appeals. *Journal of Consumer Psychology*, 15(4), 275-287.
Siu, W. (2010). Fear Appeals and Public Service Advertising: Applications to Influenza in Hong Kong. *Health Communication*, 25(6-7), 580.
Snipes, R. L., LaTour, M. S. and Bliss, S. J. (1999). A Model of the Effects of Self-Efficacy on the Perceived Ethicality and Performance of Fear Appeals in Advertising. *Journal of Business Ethics*, 19(3), 273-285.
Stern, B. B. (1988). Medieval Allegory: Roots of Advertising Strategy for the Mass Market. *Journal of Marketing*, 52(3), 84-94.
Tanner, J. F., Hunt, J. B. and Eppright, D. R. (1991). The Protection Motivation Model: A Normative Model of Fear Appeals. *Journal of Marketing*, 55(3), 36-45.
Thayer, R. E. (1967). Measures of Activation through Self-Report. *Psychological Reports*, 20(2), 663-678.
Thayer, R. E. (1978). Toward a Psychological Theory of Multidimensional Activation (Arousal). *Motivation and Emotion*, 2(1), 1-34.
Thayer, R. E. (1986). Activation-Deactivation Adjective Checklist: Current Overview and Structural Analysis. *Psychological Reports*, 58(2), 607-614.
Thayer, R. E. (1996). *The Origin of Everyday Moods: Managing Energy, Tension, and Stress*, New York: Oxford University Press.
Treise, D., Wolburg, J. M. and Otnes, C. C. (1999). Understanding the 'Social Gifts' of Drinking Rituals: An Alternative Framework for PSA Developers. *Journal of Advertising*, 28(2), 17-31.

Van Huyssteen, L. (2011). Fear-Based Advertising Appeals: Assessing Execution Styles of Social Marketing Campaigns. University of Stellenbosch Master's Thesis. Retrieved on June 16, 2011 from http://scholar.sun.ac.za/handle/10019.1/5445?show=full.

Viljoen, E. N., Terblanche-Smit, M. and Terblanche, N. S. (2010). Breaching the Tension Threshold in Fear Appeals: An Experimental Investigation. *Management Dynamics*, 19(2), 2-16.

Witte, K. (1992). Putting the Fear Back into Fear Appeals: The Extended Parallel Process Model. *Communication Monographs*, 59(4), 329-349.

Witte, K. (1993). Message and Conceptual Confounds in Fear Appeals: The Role of Threat, Fear, and Efficacy. *The Southern Communication Journal*, 58(2), 147-156.

Witte, K. (1994). Fear Control and Danger Control: A Test of the Extended Parallel Process Model (EPPM). *Communication Monographs*, 61(2), 113-134.

Witte, K. and Allen, M. (2000). A Meta-Analysis of Fear Appeals: Implications for Effective Public Health Campaigns. *Health Education and Behavior*, 27(5), 591-615.

Witte, K. and Morrison, K. (2000). Examining the Influence of Trait Anxiety/Repression-Sensitization of Individuals' Reactions to Fear Appeals. *Western Journal of Communication*, 64(1), 1-28.